NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

"CERTIFICATION OF BITUMINOUS MATERIALS"

SCOPE

This method describes specific procedures for the initial documentation of bituminous materials for use on N.Y.S. projects. It supplements the requirements of Materials Method N.Y. 5 for paving grade asphalts used in plant mix bituminous concrete and supersedes all previous instructions issued for this material .

GENERAL METHOD

Each lot of bituminous material, of which all or any portion thereof is intended for use on N.Y.S. projects, is sampled, tested and certified by the producer or supplier (primary source) prior to its shipment to point of use. Such samples are tested in accordance with Specifications and the certified test results for all items except paving grades submitted to the Materials Bureau. The certified test results for paving grades shall be filed at the primary source.

Each shipment from such certified lots of material is accompanied by a Certified Shipment Notice, Form BR 162, which constitutes initial documentation at point of delivery. However, subsequent samples taken by Department personnel may result in rejection of any or all portions of a lot when, in the opinion of the Deputy Chief Engineer (Research), Laboratory test results show substantial deviations from the Specifications.

CERTIFICATION OF TEST RESULTS

Prior to any shipment of bituminous material to point of use, a representative sample shall be taken by the producer or supplier, such gallonage represented shall then constitute a definite lot, and the point of sampling shall be considered as the primary source of the material. The sample shall be tested in accordance with current New York State test methods for the properties described for that particular grade of material. All test results (performed and typical) shall be certified by a responsible representative of the company prior to shipment from the lot.

Lined paragraph represents inclusion of new or revised material.

CERTIFICATION OF TEST RESULTS (continued)

Certified test results for paving grade asphalts Items 64, 64P and 65 shall be kept on file by the producer, as stipulated by the Materials Bureau, subject at all times to Department inspection. Certified test results for all other bituminous materials shall be recorded on Form BR 247, Certified Test Analysis, and submitted to the Materials Bureau prior to shipment from the lot.

Certification of test results shall include all of the following information:

1. Name, address and telephone number of primary source.

2. Lot number assigned by primary source.

3. N.Y.S. Item No. and grade of material.

4. Gallonage represented @ 60°F.

5. Figure 1 on the following page specifies the properties for each item that must be certified with either results from actual tests preformed on the material or typical test results derived from the supplier's previous experience.

   Certified tests for emulsions do not need to include test results from previously certified base material. However, the primary source and lot number of the base material shall be included as part of the Certified Test Analysis.

6. Signature of company employee, title and date of certification. Note that the certifying employee must be a responsible representative of that company having possession of the material at point of sampling.

7. Additional information regarding retested lots as required by this method.

Samples of the Certified Test Analysis, Form BR 247, are shown as Figures 2 and 3.

Lined paragraph represents inclusion of new or revised material.

TESTS REQUIRED

KEY
A= Actual Test Results Required

T= Tyical Test Results Required

REQUIRED TESTS / ITEMS	64, 64P, 65	66B	66D	67B,67C,67D,67E,67G	67DX	69, 69C, 69MA	69MB, 69R	70	70B	70B/C	70C	70M/A	70MS	Emulsion Base	71, 71B/A, 71B/B	71C	72/A, 72/B, 72/C	73/A, 73/B	73A/A, 73A/B, 73A/C	74/A, 74/B, 74/C	75/A, 75/B	
% Water	T			T	T	T	T	T	T	T	T	T	T		T	T	A	A	A	A	A	
Homogeneous	T	T	T					T	T	T	T	T	T		T	T						
Sp. Gr. @ 60°F.	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A						
Pen. @ 77°F., 100g., 5 sec.	A			T	T	T	T							A	A	A						
Pen. @ 32°F., 200g., 60 sec.																T						
Pen. @ 115°F., 50g., 5 sec.																T						
Pen. Ratio 39.2°F./77°F.	A					T	T								A							
% Loss @ 325°F.	T														T	T						
% Pen. of Residue	T														T	T						
% Sol. in CCl_4	T			T	T	T	T							T	T	T						
Flash Point. °F.	A			T	T										A	A						
Ductility @ 77°F., cm.	T			T	T	T	T							T	T	T						
Softening Point. °F.															T	T	T	T	T	T	T	
% Asphalt		A	A					A	A	A	A	A	A									
% Ash		T	T					T	T	T	T	T	T									
Furol Viscosity @ 77°F.									T				T									
Furol Viscosity @ 122°F.		T	T					T		T												
Settlement, 7 days		T	T						T	T	T	T	T									
Cement Mixing													A									
Screen Test		T	T					T	T	T	T	T	T									
Demulsibility, N/50 (35)									A	A												
Demulsibility, N/10 (50)											A											
Pen. of Distil. Res. @ 77°F.		A	A					A	A	A	A	A	A									
Oil of Distillate, % by Vol.		A	A					A	A	A	A	A	A									
Particle Charge		T	T																			
ph		T	T																			
Stone Coating			A					A				A	A									
Kimematic Viscosity @ 140°F.				A	A	A	A															
Distillation				A	A	A	A										A	A	A	A	A	
% Residue from Distillation				A	A	A	A															
Flash Point. °F.														A								
Stripping Test.					A																	
Engler Viscosity °C.																		A		A	A	
Float Test. °C.																	A		A			
Sp. gr. @ 25°C./25°C.																	A	A	A	A	A	
Total Bitumen % wt.																	T	T	T	T	T	

NYSDOT
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50 Wolf Road, POD 34
Albany, New York 12232

CERTIFICATION OF TEST RESULTS (continued)

Lot numbers shall be assigned consecutively during any calendar year begining with Lot 1, regardless of the grade and item represented.

Bituminous material certified prior to October 15th shall not be used after May 15 of the following year unless it is retested and recertified. Bituminous material certified on or after October 15th may be used the following year without recertification.

SHIPMENT CERTIFICATION

Each shipment of material intended for eventual use on N.Y.S. projects from lots sampled in accordance with this Method shall be accompanied by a Certified Shipment Notice (Form BR 162). A copy of such a notice for line blended material shall be sent to the Materials Bureau at the time of shipment. It is not necessary to submit Certified Shipping Notices to the Materials Bureau for materials other than line blend.

All copies of each Certified Shipment Notice, whether from primary source or intermediate supplier, shall include a statement that the material has been tested and that certified test results indicating conformance with all requirements of the Specifications are on file.

When the point of delivery is a N.Y.S. project or a mixing plant, an additional copy of the Certified Shipment Notice shall be sent to the District Office having jurisdiction over the plant or project. Shipment Notices accompanying each shipment to a N.Y.S. project must include the contract number or highway maintenance number of the project. Samples of a Certified Shipment Notice accompanying a shipment of bituminous material are shown as Figures 5,6, and 7. No project identifications are required on shipment notices to mixing plants; however, shipments to "traveling" pugmills incorporating the bitumen into the work at the project site shall be identified by project number.

Lined paragraph represents inclusion of new or revised material.

SHIPMENT CERTIFICATION (continued)

When one or more distributors remain at the project site and are reloaded by transport deliveries at the site, the Shipment Notice accompanying the transport shall be sufficient initial documentation for the material. Should the transport serve two or more projects, Shipment Notices are required for each project delivery.

Bituminous material delivered in drums shall be accompanied by a Certified Shipment Notice for each lot of material in the shipment. In addition, each drum shall be clearly labeled with information as to item, grade, name and location of primary source and lot number.

The minimum information required on any Certified Shipment Notice shall include:

Quantity of material in the shipment (Usually gallons @ 60°F. but the substitution of tons or lbs. for deliveries of paving grade asphalts to mixing plants is acceptable).

Grade and N.Y.S. Item No. of material.

Specific gravity @ 60°F.

Identification by company name and mailing address of primary source, shipment destination and point of shipment.

Lot number.

Identification of delivery vehicle.

Percentage of additive, if added

Signature and title of certifying officer; date of certification.

Statement that test results are on file and are within Specification.

Where early morning deliveries make accurate determinations of this quantity impractical, it may be deleted from the Shipment Notice so long as such a deletion is noted and the actual quantity is reported to the recipient that same day.

In addition, information regarding component materials for line blended shipments shall be recorded as described under the "Line Blended Materials" section of this Method.

TEMPERATURE-VISCOSITY CURVES

A temperature-viscosity curve covering the range of temperatures and viscosities in which the bitumen may be used, shall be included with the first shipment to a plant or project from all lots of paving grades, liquid and cut-back asphalts. The curves shall have ordinates plotted in Kinematic Viscosity (units of Centistokes) and the abscissa in terms of temperature in degrees fahrenheit. Any subsequent shipments to that same plant or project from the same lot will not be required to include temperature-viscosity curves.

When different grades of bitumen are blended to produce a different item, a new temperature-viscosity curve shall be formulated either from test results on the blended material or by proportioning the results of the temperature-viscosity curves covering the component materials. When this is done at a line blending source, the temperature-viscosity curve need only be included with the first shipment to a plant or project unless changes in the component materials or blending proportions necessitate a new curve.

INTERMEDIATE STORAGE AND RECERTIFICATION

When lots of material are transported and stored without loss of identity, the shipper may execute the Certified Shipment Notice in a manner similar to that shown in Figure 5. A lot shall be considered to have been stored without loss of identity only when the tank in which it is placed has been emptied of all other lots of material.

Bituminous materials of the same grade but not of the same source and/or lot, may be stored in a common tank without retest. (Under no circumstances shall emulsions of different lots be stored in a common container without retest and recertification.) The shipper shall then be considered a primary source and shall assign a lot number covering the material in the tank. In this case, the blended specific gravity reported on the shipment notices may be determined by proportioning the specific gravities of the component materials by their relative quantities. For example, if 4,501 gallons with a specific gravity of 0.92 are added to 505 gallons with a specific gravity of 1.02, the specific gravity of the blend is:

$$\frac{0.92 \times 4{,}501 + 1.02 \times 505}{4{,}501 + 505} = 0.93$$

INTERMEDIATE STORAGE AND RECERTIFICATION (continued)

Temperature-viscosity curves may be proportioned in a similar manner.

Information as to previous primary sources, lot numbers and quantities of the constituent materials in the tank shall be submitted to the Materials Bureau in lieu of the certified test report in a manner similar to that shown in Figure 4.

At the owner's option, he may elect to retest and recertify the material at any time, whereon he will become the primary source, assigning a new lot number to all shipments from the recertified quantities.

Whenever previously certified bituminous materials of different grades are combined in a common tank, the material in the tank shall be sampled and a certified test analysis sent to the Materials Bureau. A new lot number shall be assigned by the owner covering the material represented by the sample and he shall be considered a primary source.

LINE BLENDED MATERIALS

Line blended bitumens shall be acceptable only when manufactured by approved automatic temperature correcting equipment accurate to one-half of one percent of the quantities measured.

All component bituminous material used in the line blending process shall be either from shipments received on the basis of Certified Shipment Notices as described in this Materials Method, or they shall be sampled and a certified test analysis filed prior to its use. If the latter course is adopted, a lot number shall be assigned to the component material by the owner of the line blending facilities covering all material represented by the sample of samples and he shall be considered as the primary source of that material.

When solvents and/or additives are line blended with the bituminous materials, their grades, quantities, and proportions shall be stated on the Certified Shipment Notice. The blender shall assign the same lot number to each shipment of each grade of line blended material blended in the same proportions from the same component lots, designating himself as the primary source. In addition, information as to primary sources, lot numbers and proportions shall be recorded on the Certified Shipment Notice.

LINE BLENDED MATERIALS (continued)

See Figure 7. A copy of the temperature-viscosity curve for the blended material shall accompany the first shipment of a lot to a project.

In the event, line blended material is put into a storage tank for later shipment certified test results must be submitted to the Materials Bureau.

Lined paragraph represents inclusion of new or revised material.

EXAMPLE OF A CERTIFIED TEST ANALYSIS

ASPHALT CUTBACK

Form BR 247 (2/68)

CERTIFIED TEST ANALYSIS

Lot No. 4
N.Y.S. Item No. 67DX
Grade MC.250
Gallons @ 60°F. 50,000

PRIMARY SOURCE: Name BLACK OIL CO
Address 210 SOUTH ST
PORT NEW YORK ZIP 89313
Telephone No.: Area Code 000 - 592-8000

CUTBACKS		EMULSIONS		ASPHALTS & ROAD TARS	
Certified Test Results:		**Certified Test Results:**		**Certified Test Results:**	
Kinematic Vis. @ 140°F. cs	350	Asphalt %		Water %	
Distillation -% by Vol.		Cement Mixing		Sp. Gr. @ ___°F./___°C.	
to 374°F.		Demulsibility N/50		Pen. @ 77°F.	
to 437°F.	5	Demulsibility N/10		Pen. Ratio	
to 500°F.	35	Pen. Distl. Res. @ 77°F.		Flash Point °F.	
to 600°F.	68	% Oil of Distillate (Based on Tot. Emul.)		Engler, Sp.Vis. @ 40°C.	
Residue from Distl. to 680°F % Vol.by Dif.	70	Stone Coating		Engler, Sp.Vis. @ 50°C.	
Stripping (67 DX)	Passed	Sp. Gr. @ 60°F		Float Test @ 32°C.	
Sp. Gr. @ 60°F.	0.956			Float Test @ 50°C.	
Typical Test Results:		**Typical Test Results:**		Distillation -% by Vol.	
Water %	0.1	Water %		to 170°C.	
Flash Point °F.	160	Homogeneous		to 200°C.	
Tests on Residue -		Ash %		to 235°C.	
Pen. @ 77°F.	200	Furol Vis. @ 77°F. sec.		to 270°C.	
Pen. Ratio		Furol Vis. @ 122°F. sec.		to 300°C.	
Ductility (cm.)	110	Settlement @ 7 Days			
% Sol. in CCl_4	99.7	Screen Test		**Typical Test Results:**	
		Particle Charge		Homogeneous	
Test on Emulsion Base:		ph		% Loss @ 325°F	
Pen. @ 77°F. (Actual)				% Pen. of Res.	
Flash Point °F.(Actual)		**Asphalt Base for Emulsion:**		Ductility @ 77°F. (cm.)	
Sp. Gr. @ 60°F. (Actual)		Lot No.		Tot. Bitumen, % Wt.	
Ductility @ 77°F.(Typ.)		Company:		Soft. Point.(°F)or(°C)	
Sol. in CCl_4% (Typical)				% Sol. in CCl_4	

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.

AUTHORIZED SIGNATURE: John Doe TITLE: Vice President DATE: 5-6-68

FIGURE 3

EXAMPLE OF A CERTIFIED TEST ANALYSIS

ASPHALT EMULSION

Form BR 247 (2/68)

CERTIFIED TEST ANALYSIS

Lot No. 3

N.Y.S. Item No. 701.5

Grade _____

Gallons @ 60°F. 25000

PRIMARY SOURCE: Name ABC ASPHALT CO

Address 100 MAIN ST

VALLEY, NY ZIP 46203

Telephone No.: Area Code 000 - 498-1000

CUTBACKS		EMULSIONS		ASPHALTS & ROAD TARS	
Certified Test Results:		**Certified Test Results:**		**Certified Test Results:**	
Kinematic Vis. @ 140°F. cs		Asphalt %	58	Water %	
Distillation -% by Vol.		Cement Mixing	1.8	Sp. Gr. @ ___°F./___°C.	
to 374°F.		Demulsibility N/50		Pen. @ 77°F.	
to 437°F.		Demulsibility N/10		Pen. Ratio	
to 500°F.		Pen. Distl. Res. @ 77°F.	150	Flash Point °F.	
to 600°F.		% Oil of Distillate (Based on Tot. Emul.)	40	Engler, Sp.Vis. @ 40°C.	
Residue from Distl. to 680°F % Vol. by Dif.		Stone Coating	Passed	Engler, Sp.Vis. @ 50°C.	
Stripping (67 DX)		Sp. Gr. @ 60°F	1.001	Float Test @ 32°C.	
Sp. Gr. @ 60°F.				Float Test @ 50°C.	
Typical Test Results:		**Typical Test Results:**		Distillation -% by Vol.	
Water %		Water %	38	to 170°C.	
Flash Point °F.		Homogeneous	Yes	to 200°C.	
Tests on Residue -		Ash %	1.0	to 235°C.	
Pen. @ 77°F.		Furol Vis. @ 77°F. sec.	40	to 270°C.	
Pen. Ratio		Furol Vis. @ 122°F. sec.		to 300°C.	
Ductility (cm.)		Settlement @ 7 Days	2.0		
% Sol. in CCl_4		Screen Test	0.01	**Typical Test Results:**	
		Particle Charge		Homogeneous	
Test on Emulsion Base:		ph		% Loss @ 325°F	
Pen. @ 77°F. (Actual)				% Pen. of Res.	
Flash Point °F. (Actual)		**Asphalt Base for Emulsion:**		Ductility @ 77°F. (cm.)	
Sp. Gr. @ 60°F. (Actual)		Lot No. 10		Tot. Bitumen, % Wt.	
Ductility @ 77°F. (Typ.)		Company:		Soft. Point. (°F) or (°C)	
Sol. in CCl_4 % (Typical)		MOON OIL CO		% Sol. in CCl_4	
		BAY CITY, NY			

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.

AUTHORIZED SIGNATURE: John Doe TITLE: CHIEF CHEMIST DATE: 4-6-68

RECERTIFICATION REPORT

PRIMARY SOURCE:

ABC Materials Co.

100 Main Street
Street

Valley	N.Y.	23456
City	State	Zip Code

444-7777
Tel. No.

Lot No.	Item No.	Grade	Gals. @ 60°F.	Spec. Gr. @ 60°F.
1	64	85-10	30,000	1.02

CERTIFIED - LOTS OF SAME ITEM BLENDED WITHOUT RETESTING

PRIMARY SOURCE OF COMPONENT LOTS	LOCATION	LOT NO.	GALLONS 60°F.	SPECIFIC GRAVITY @60°F.
XYZ Oil Co.	Port, N.Y.	10	20,000	1.01
Moon Oil Co.	Shine, N.Y.	6	10,000	1.04

I hereby certify that the above information is correct to the best of my knowledge.

AUTHORIZED SIGNATURE John Doe

TITLE Executive Sec.

RECERTIFICATION DATE 3/8/68

EXAMPLES OF TYPICAL CERTIFIED SHIPMENT NOTICES

Figure 5 - The material has been sampled and tested by XYZ Oil Company and the certified test results sent to the Materials Bureau. The gallonage shipped may be only part of the total material represented by the test sample and identified as Lot No. 10.

Figure 6 - The shipment received by the ABC Materials Company was stored without losing lot identity. Therefore, the primary source is still XYZ Oil Company.

Figure 7 - The shipment of Lot 10 received by Hiway Products Company, Primary Source - XYZ Oil Company was line blended with another material and shipped to project site. Hiway Products becomes Primary Source and assigns a Lot No. to all of the material blended of the same lots, in the same proportions.

Figure 5

Form BR 162 b (2/68)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

DELIVERY TKT. # 26978

ITEM 64

GRADE 85-100

% ADDITIVE 1%

BITUMINOUS MATERIAL

CERTIFIED SHIPMENT NOTICE

PRIMARY SOURCE	LOCATION	LOT NO.
XYZ Oil Co.	150 South Street, Port, New York	10

SUPPLIER	LOCATION
XYZ Oil Co.	150 South Street, Port, New York

SHIPMENT DESTINATION	LOCATION
ABC Materials Co.	100 Main St., Valley, New York

GAL. @ 60°F.	SPEC. GRAVITY @ 60°F.	VEHICLE NO.	CONTRACT NO.
250,000	1.01	5	

SHIPPED IN: ☐ BULK TRANSPORT ☐ BULK R.R. ☒ BULK BARGE ☐ BARRELS ☐ DISTRIBUTOR

Complete the following section for LINE BLENDED BITUMENS ONLY

ITEM GRADE	PRIMARY SOURCE	LOCATION	LOT NO.	GALLONS @ 60°F	% TOTAL	SPEC. GRAVITY @ 60°F.

The above indicated material has been tested and a CERTIFIED TEST REPORT dated 5-2-68, indicating conformance with all requirements of Department Specifications is on file.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.

John Doe
Authorized Signature (For Supplier)

Vice President
Title

6-14-68
Date

DISTRUBUTION: BLUE - With Shipment; YELLOW - To Materials Bureau for line blend only; PINK - To District; WHITE - To Supplier

Figure 6

Form BR 162 b (2/68)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

DELIVERY TKT. # 42693

ITEM 64

GRADE 85.000

% ADDITIVE 1%

BITUMINOUS MATERIAL

CERTIFIED SHIPMENT NOTICE

PRIMARY SOURCE	LOCATION	LOT NO.
XYZ Oil Co.	150 South Street, Port, New York	10

SUPPLIER	LOCATION
ABC Materials Co.	100 Main Street, Valley, New York

SHIPMENT DESTINATION	LOCATION
Hiway Products Co.	100 State Street, Burg, New York

GAL. @ 60°F.	SPEC. GRAVITY @ 60°F.	VEHICLE NO.	CONTRACT NO.
5,000	1.01	38	

SHIPPED IN: [X] BULK TRANSPORT [ ] BULK R.R. [ ] BULK BARGE [ ] BARRELS [ ] DISTRIBUTOR

Complete the following section for LINE BLENDED BITUMENS ONLY

ITEM GRADE	PRIMARY SOURCE	LOCATION	LOT NO.	GALLONS @ 60°F	% TOTAL	SPEC. GRAVITY @ 60°F.

The above indicated material has been tested and a CERTIFIED TEST REPORT dated APRIL 1,1968 indicating conformance with all requirements of Department Specifications is on file.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.

John Doe
Authorized Signature (For Supplier)

SHIPPING FOREMAN
Title

JULY 4 1968
Date

DISTRUBUTION: BLUE - With Shipment; YELLOW - To Materials Bureau for line blend only; PINK - To District; WHITE - To Supplier

Figure 7

Form BR 162 b (2/68)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

DELIVERY TKT. # 92145

ITEM 69 M.B.

GRADE R.C 800

% ADDITIVE

BITUMINOUS MATERIAL

CERTIFIED SHIPMENT NOTICE

PRIMARY SOURCE	LOCATION	LOT NO.
HIWAY PRODUCTS CO.	10 STATE STREET, BURG, NEW YORK 2	
SUPPLIER	LOCATION	
HIWAY PRODUCTS CO.	10 STATE STREET, BURG, NEW YORK	
SHIPMENT DESTINATION	LOCATION	
ROADS CONTRACTING CO.	25 PLUM STREET, HILL, NEW YORK	

GAL. @ 60°F.	SPEC. GRAVITY @ 60°F.	VEHICLE NO.	CONTRACT NO.
5,000	0.96	10	FARC 64-21

SHIPPED IN: [X] BULK TRANSPORT [ ] BULK R.R. [ ] BULK BARGE [ ] BARRELS [ ] DISTRIBUTOR

Complete the following section for LINE BLENDED BITUMENS ONLY

ITEM GRADE	PRIMARY SOURCE	LOCATION	LOT NO.	GALLONS @ 60°F	% TOTAL	SPEC. GRAVITY @ 60°F.
69MB, RC800	SOLAR OIL CO.	SEAWAY, N.J.	8	500	10%	0.95
85-100	XYZ OIL CO.	PORT, N.Y.	10	4500	90	1.00

The above indicated material has been tested and a CERTIFIED TEST REPORT dated 6-10-1968, indicating conformance with all requirements of Department Specifications is on file.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS CORRECT TO THE BEST OF MY KNOWLEDGE.

John Doe
Authorized Signature (For Supplier)

Dispatcher
Title

8-8-1968
Date

DISTRUBUTION: BLUE - With Shipment; YELLOW - To Materials Bureau for line blend only; PINK - To District; WHITE - To Supplier

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

"SAMPLING BITUMINOUS MATERIALS"

SCOPE

This method describes specific procedures for sampling bituminous materials used on N.Y.S. projects. It supplements the requirements of Materials Method N.Y. 5 for paving grade asphalts used in plant mix bituminous concrete and supersedes all previous sampling instructions issued for this material.

GENERAL METHOD

Each shipment of bituminous material arriving at a bituminous mixing plant or project site is accompanied by a Certified Shipment Notice, Form BR 162, identifying the bitumen by primary source and lot number. Upon receipt of this shipment notice, the material is sampled from the recirculating line or storage tank at the mixing plant and from the spray truck at the project site. However, shipments of bituminous material in barrels or solid form not subject to contamination need be sampled only when the material is judged by the Engineer to be unsatisfactory.* Documentation for the bitumen at plant or project consists of the Certified Shipment Notice. However, rejections of bitumen represented by the samples may be made on the basis of Laboratory test results which, in the opinion of the Deputy Chief Engineer (Research), show substantial deviation from the Specifications.

DOCUMENTATION OF MATERIAL

Before any portion of a lot is incorporated into the work or sampled, the Contractor shall present the Inspector with a Certified Shipment Notice for the delivered material. In addition, the Inspector shall ascertain that he has received a temperature-viscosity curve for each lot from which paving grade, liquid or cutback material is delivered to plant or project.

* New procedure.

Received copies of the Certified Shipment Notice shall become part of the contract records for material delivered to the project site, and part of the Inspector's records for material delivered to a bituminous mixing plant off the project site.

When material is delivered by transport and transferred to distributors at the project site under supervision of the Inspector, only the certified shipment notice accompanying the transport is required for documentation.

PROJECT SAMPLING METHODS

Each delivery vehicle or distributor used to incorporate the bitumen into the work shall be equipped with a sampling valve similar in design to that described in the Asphalt Institute publication IS-133 or as recommended by the Truck Trailer Manufacturers Association (see attached sketches). It shall be installed at least one foot from the shell so as to provide samples of the bituminous material with maximum access and safety to the sampler and shall be clearly labeled as a "Sampling Valve." When samples are taken through such valves in accordance with these instructions they shall be considered to be representative of all material in the vehicle at the start of application. Each delivery of material from such vehicles shall be sampled. Sampling may be done before the material is incorporated into the work or at any convenient stopping point before the vehicle is emptied. Regardless of when taken, the sample shall represent all material originally in the vehicle.

In general, samples shall be taken from each distributor load; not from the transport. However, in situations where the distributor remains continuously at the project, only the first distributor load need be sampled and thereafter, a sample taken from each transport delivery instead of each distributor, at the option of the Engineer.

Samples of bituminous materials shall be taken from the delivery tank or truck whenever the material is transported or incorporated into the work by State-owned equipment. These samples must be taken prior to placing of the material in State Owned tanks, barrels or equipment.

The following sizes and types of containers shall be used:

Emulsions - 1 Quart Glass or Plastic* (Screw Top)

Cutbacks - 1 Quart Metal (Screw top)

Paving Asphalts - 1 Pint Cardboard

Containers may be obtained through contact with the Materials Bureau. Before filling any sample container, it is absolutely essential to waste at least one gallon through the sampling valve. The sample shall then be taken by directly filling the sampling container from the sampling valve.

At the option of the Contractor and with permission of the Project Engineer, sampling may be done by the Contractor's personnel under close supervision of the Inspector. Such permission may be withdrawn at any time, at the discretion of the Project Engineer.

PLANT SAMPLING METHODS

All mixing plants shall be equipped with a sampling valve so designed and installed as to be nonclogging, safe and completely divorced from any solvent cleanout operation. At plants having more than one bituminous storage tank, the valve shall be installed in the line between the tanks and pugmill. Plants having only one storage tank will have the option of installing the valve directly into the tank. In either case, the valve shall be preferably located no more than three (3) feet above ground level and clearly labeled as a "Sampling Valve." However, higher locations may be approved by the District Engineer if adequate facilities are provided for both safe sampling and convenience in disposing of the wasted gallon of material. When samples are taken through such valves in accordance with these instructions, they shall be considered to be representative of all material used by the plant until the time of the next sampling.

Samples shall usually be taken after each delivery of material to the plant but not until at least ten (10) batches of the mix have been produced since the delivery vehicle was completely unloaded.

* New procedure.

At times, when plant inspection is intermittent and deliveries have been made during non-inspection periods, a sample shall be taken within the first ten (10) minutes of the resumption of production for N.Y.S. projects. When several vehicles are unloading within a short period of time, sampling may be deferred, at the option of the Inspector, until all vehicles have unloaded. If the receiving tank is not connected with a recirculating line to the mixer at the time of delivery, the sampling shall be deferred until the recirculating line is attached and sufficient material run through it to ensure a representative sample. Whenever two or more tanks are interconnected so that asphalt circulates throughout all of them, they shall be considered as one tank. Regardless of when taken, a sample shall represent all material used by the plant until the time when the next sample is taken.

Traveling pugmills shall be sampled from an approved sampling valve located on the transport or on the delivery line to the pugmill.

One pint cardboard containers (available on request from the Materials Bureau) shall be used for paving grade asphalts. Care should be taken to ensure that the pint containers are at least three-quarters filled; preferably more, to obtain sufficient sample size.

Before filling any sample container, it is absolutely essential to waste at least one gallon through the sampling valve. The sample shall then be taken by directly filling the sampling container from the sampling valve.

SAMPLE SUBMISSION AND STORAGE

All bituminous samples must be protected from the weather prior to shipment or placement in storage. Storage of samples shall be in an area sufficiently ventilated so as to avoid excessive temperatures.

(a) Project Samples (Cutbacks and Paving Grades)

Samples of bitumen delivered to the project shall be stored in the office of the Project Engineer in groups identified by the bitumen grade, primary source and lot number found on the certification accompanying the shipment. The first sample in each group shall be

immediately forwarded to the Materials Bureau for test. Subsequent samples shall be stored until twenty (20) are accumulated in any one group. At that time, a random sample shall be selected from the group and sent to the Materials Bureau for test. A new group shall then be started and the above process repeated. All sample groups shall be kept in storage until final acceptance of the project, and during that time, the Bureau may request any or all samples in a group for test. In addition, the Project Engineer, at his discretion, may send further samples to the Bureau for test. If the number of deliveries to project is such as not to allow the accumulation of twenty (20) samples in a reasonable time, a sample shall be taken from a group of less than twenty (20).

(b) Plant Samples (Cutbacks and Paving Grades)

These samples shall be stored in the Plant Inspector's office in groups identified by asphalt grade and time taken. The first sample in each group shall be immediately forwarded to the Materials Bureau for test. Subsequent samples shall be stored until twenty (20) are accumulated in any one group. At that time, the District Materials Engineer shall select a random sample from the group and send it to the Materials Bureau for test. A new group shall then be started and the above process repeated. In addtion, whenever deliveries to the plant of new and different lots of materials occur, the first sample of each new lot shall be sent directly to the Bureau. All sample groups shall be stored until the final acceptance of all projects represented by that group and during that time, the Bureau may request any or all samples in a group for test. In addition, the Materials Engineer, at his discretion, may send further samples to the Bureau for test. If the number of deliveries to a plant is such as not to allow accumulation of twenty (20) samples in a reasonable time, a sample shall be taken from a group of less than twenty (20).

(c) Emulsion Samples (Plant or Project)

Due to the critical nature of this material, all Emulsion samples shall be submitted to the Laboratory within two (2) working days from the time of sampling.

SAMPLE IDENTIFICATIONS AND PAPERWORK

*Immediately upon sampling, Form BR170b shall be executed and the last copy securely affixed to the sample container. When the sample is mailed to the Materials Bureau, the White and Green copies shall be enclosed in a plain envelope and transmitted inside the package containing the sample and its container. The pink copy is retained by the inspector and the yellow copy to be retained in the District files. When samples are to be stored, copies 1,2,3 and 4 are to be filed as long as the samples are kept. If samples are discarded, likewise discard copies 1,2,3 and 4.

The primary source and lot number recorded on Form BR170b, covering material sampled at mixing plants off the project site, shall be that of the last shipment to the plant, regardless of the quantities of other lots in storage.

Completed copies of Form 170b for project and plant samples are shown as Figures 1 and 2 in this Method.

*Revised procedure

Shown below is a copy of Form BR 170a executed at the project site.

FIGURE 1

FORM BR-170b (9/68) NEW YORK STATE DEPT. OF TRANSPORTATION MATERIALS BUREAU	BITUMEN OR MIX SAMPLE	FOR LAB USE ONLY TEST NO. DATE REC'D.
SEE REVERSE SIDE FOR INSTRUCTIONS		SERIAL NO. 63507

PRIMARY SOURCE*	LOCATION*
Highway Products	10 State Street, Burg, N.Y.

LOT. NO.*	ITEM NO.*†	GRADE TYPE*†	DATE SAMPLED*†	TIME SAMPLED*†
2	69MB	RC-800	6/6/68	10:30 a.m.

SAMPLED BY*†	DISTRICT NO.*†	JOB-MIX FORM. NO.†	TONS REPRESENTED†
Joseph Bushey	11		

COMPLETE THIS SECTION FOR SAMPLES TAKEN AT BITUMINOUS CONCRETE PLANT.	COMPLETE THIS SECTION FOR SAMPLES TAKEN AT PROJECT SITE.
NAME OF OWNER*†	NAME OF SUPPLIER*† Highway Products — LOCATION*† Burg, N.Y.
LOCATION*†	CONT. OR HM NO.*† FARC 00-00 — VEHICLE NO.* 10
REMARKS:*†	STATION AND LANE*† WB 56 + 50 - 57 + 50 Lane 1 & 2
	GALS. REP. AT 60° F.* 4,981

DISTRIBUTION – • Yellow to Dist. File • Pink to Inspector • White & Green to Materials Bureau within Sample Pkg. • White Card (Part #5) – Affix to Sample Container

COMPLETE FOR BITUMEN SAMPLE* COMPLETE FOR MIX SAMPLE†
COMPLETE FOR EITHER TYPE OF SAMPLE*†

Shown below is a copy of Form BR 170a executed at a mixing plant.

FIGURE 2

FORM BR-170b (9/68) NEW YORK STATE DEPT. OF TRANSPORTATION MATERIALS BUREAU	BITUMEN OR MIX SAMPLE	FOR LAB USE ONLY TEST NO. DATE REC'D.
SEE REVERSE SIDE FOR INSTRUCTIONS		SERIAL NO. 63506

PRIMARY SOURCE*	LOCATION*
Highway Products	10 State Street, Burg, N.Y.

LOT. NO.*	ITEM NO.*†	GRADE TYPE*†	DATE SAMPLED*†	TIME SAMPLED*†
10	64	85-100	6/6/68	2:05 p.m.

SAMPLED BY*†	DISTRICT NO.*†	JOB-MIX FORM. NO.†	TONS REPRESENTED†
Joseph Bushey	11		

COMPLETE THIS SECTION FOR SAMPLES TAKEN AT BITUMINOUS CONCRETE PLANT.	COMPLETE THIS SECTION FOR SAMPLES TAKEN AT PROJECT SITE.
NAME OF OWNER*† Black Top Plant	NAME OF SUPPLIER*† LOCATION*†
LOCATION*† 35 Dust Street, Place, N.Y.	CONT. OR HM NO.*† VEHICLE NO.*
REMARKS:*†	STATION AND LANE*† GALS. REP. AT 60° F.*

DISTRIBUTION – • Yellow to Dist. File • Pink to Inspector • White & Green to Materials Bureau within Sample Pkg. • White Card (Part #5) – Affix to Sample Container

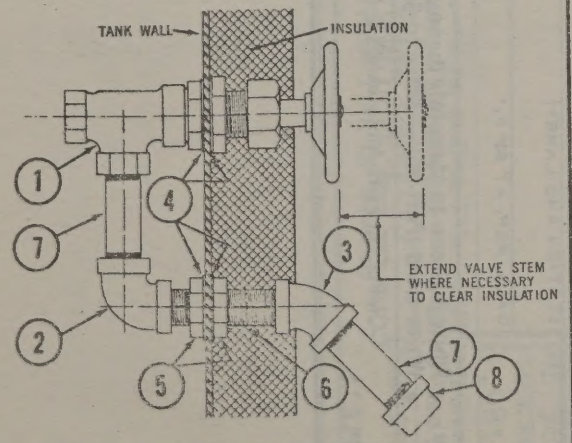
COMPLETE FOR BITUMEN SAMPLE* COMPLETE FOR MIX SAMPLE †
COMPLETE FOR EITHER TYPE OF SAMPLE*†

SAMPLING VALVE AS RECOMMENDED BY THE ASPHALT INSTITUTE

SAMPLING VALVE AS RECOMMENDED BY THE TRUCK TRAILER MANUFACTURERS ASSOCIATION

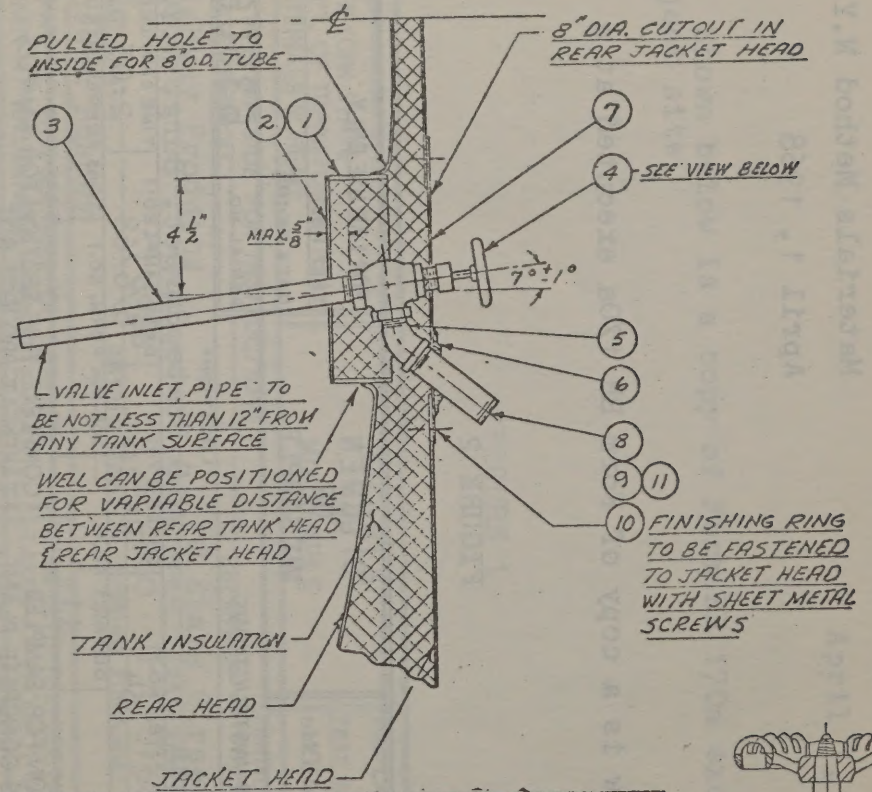
NOTE: Sampling valves on distributors or delivery vehicles serving Department projects shall be similar to either of these two. Bituminous mixing plants may be equipped with alternate designs.

Figure 1. Submerged Asphalt sampling device.

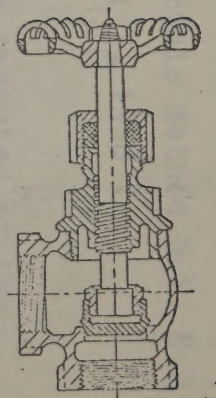


MOUNT IN LOWER HALF OF THE BULKHEAD AT LEAST 1'-0" FROM THE SHELL

REF. No.	DESCRIPTION	No. REQ.
1	¾" 'VOGT' P-9844 STEEL ANGLE VALVE OR SIMILAR, PANEL MOUNTED	1
2	¾" STEEL OR MALL. IRON 90° ELBOW	1
3	¾" STEEL OR MALL. IRON 45° ELBOW	1
4	ASBESTOS GASKETS SNUG ON THREAD OR WOUND WITH YARN	4
5	¾" 150# SCREWED M. I. LOCKNUT	2
6	¾" x 3½" ± PARALLEL THREADED STEEL PIPE NIPPLE (CUT FROM ¾" STD. TANK NIPPLE IF OTHERWISE UNOBTAINABLE)	1
7	¾" x 3" THREADED STEEL PIPE NIPPLE	2
8	¾" MALL. IRON PIPE CAP	1



1	1	2780020	COLLAR-RECESS, SAMPLE VALVE
2	1	2780019	PLATE-END, RECESS, SAMPLE VALVE
3	1	6200284	PIPE-INLET, ¾" x 13" LG, T.O.E.
4	1	6600349	VLV.- ¾", ANGLE, CRANE, #2
5	1	0140798	ELBOW-45°, STREET, ¾"
6	1	2750166	RING-FIN, THERM. WELL
7	1	2780021	RING-FIN, RECESS, SAMPLE VALVE
8	1	0190724	NIPPLE-PIPE, ¾" x 4" LG.
9	1	2780038	CAP ASM.- SAMPLING VALVE
10	12	0144736	SCREW- PARKER KALON, #14
11	2	6000435	RIVET- SOUTHCO, #38-106-05, 3/16 x 9/32 LG.



TYPICAL SECTION VIEW OF VALVE (¾ BRONZE ANGLE)

8.2-9

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LRI